



PTO/SB/08a/b (08-03)

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<b>Substitute for form 1449A/B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/909,012
				Filing Date	July 19, 2001
				First Named Inventor	Saksena et al.
				Art Unit	1653
				Examiner Name	Not Yet Assigned
Sheet	1	of	3	Attorney Docket Number	SCHERING 3.0-121

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
RM	AA	US-5,162,500	11-10-1992	Takeuchi et al.	
	AB	US-5,359,138	10-25-1994	Takeuchi et al.	
	AC	US-5,496,927	03-05-1996	Kolb et al.	
	AD	US-5,633,388	05-27-1997	Diana et al.	
	AE	US-5,739,002	04-14-1998	De Francesco et al.	
	AF	US-5,763,576	06-09-1998	Powers	
	AG	US-5,843,450	12-01-1998	Dawson et al.	
	AH	US-5,843,752	12-01-1998	Dasmahapatra et al.	
	AI	US-5,849,866	12-15-1998	Kolb et al.	
	AJ	US-5,854,001	12-29-1998	Casey et al.	
	AK	US-6,265,380-B1	07-24-2001	Tung et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
RM	BA	WO-01/74768-A2	10-11-2001	Perni et al.		
	BB	WO-01/40262-A1	06-07-2001	Han		
	BC	WO-02/18369-A2	03-07-2002	Babine et al.		
	BD	WO-92/11850	07-23-1992	Simpson et al.		
	BE	WO-94/00095	01-06-1994	Eveleth et al.		
	BF	WO-95/33764	12-14-1995	Charbonneau		
	BG	WO-97/06804	02-27-1997	McDade		
	BH	WO-98/12308	03-26-1998	De Francesco et al.		
	BI	WO-98/14181	04-09-1998	Chojkier et al.		
	BJ	WO-98/29435	07-09-1998	Baily et al.		
	BK	WO-98/37180	08-27-1998	Chen et al.		
	BL	WO-99/07733	02-18-1999	Llinas-Brunet et al.		
	BM	EP-0 423 358-A1	04-24-1991	Naganawa et al.		
	BN	EP-0 672 648-A1	09-20-1995	Naganawa et al.		
	BO	WO-00/05245	02-03-2000	Brunck et al.		
	BP	WO-99/64422	12-16-1999	Matassa et al.		
	BQ	CA-2362911-A1	09-08-2000	Takemura et al.		
	BR	FR-2778406-A1	11-22-1999	Hurst et al.		
	BS	EP-0 672 648-B1	09-20-1995	Naganawa et al.		

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Sheet	2	of	3

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published:		T <sup>2</sup>
RB	CA	BARTENSCHLAGER et al., Substrate Determinants for Cleavage in cis and in trans by the Hepatitis C Virus NS3 Proteinase, Journal of Virology, Jan. 1995, Vol. 69, No. 1, pp. 198-205		
	CB	BIANCHI et al., Synthetic Dipeptide Substrates for the Assay of Human Hepatitis C Virus Protease, Analytical Biochemistry 237, 239-244 (1996)		
	CC	BOUFFARD et al., An in Vitro Assay for Hepatitis C Virus NS3 Serine Proteinase, Virology 209, 52-59 (1995)		
	CD	CHO et al., Construction of hepatitis C-SIN virus recombinants with replicative dependency on hepatitis C virus serine protease activity, Journal of Virological Methods 65 (1997), 201-207		
	CE	D'SOUZA et al., In vitro cleavage of hepatitis C virus polyprotein substrates by purified recombinant NS3 protease, Journal of General Virology (1995), 76, 1729-1736		
	CF	FILOCAMO et al., Chimeric Sindbis Viruses Dependent on the NS3 Protease of Hepatitis C Virus, Journal of Virology, Feb. 1997, p. 1417-1427		
	CG	HAHM et al., Generation of a Novel Poliovirus with a Requirement of Hepatitis C Virus Protease NS3 Activity, Virology 226, 318-326 (1996)		
	CH	HAMATAKE et al., Establishment of an in vitro Assay to Characterize Hepatitis C Virus NS3-4A Protease Trans-Processing Activity, Intervirology 1996;39:249-258		
	CI	HARBESON et al., Stereospecific Synthesis of Peptidyl a-Keto Amides as Inhibitors of Calpain, J. Med. Chem. 1994, 37, 2918-2929		
	CJ	ITO et al., Cultivation of hepatitis C virus in primary hepatocyte culture from patients with chronic hepatitis C results in release of high titre infectious virus, J. Gen. Virol 1996 May; 77 (Pt 5):1043-54		
	CK	LU et al., Poliovirus chimeras replicating under the translational control of genetic elements of hepatitis C virus reveal unusual properties of the internal ribosomal entry site of hepatitis C virus, Proc. Natl. Acad. Sci. USA, Vol. 93, pp. 1412-1417, February 1996		
	CL	MIZUTANI et al., Characterization of Hepatitis C Virus Replication in Cloned Cells Obtained from a Human T-Cell Leukemia Virus Type 1-Infected Cell Line, MT-2, Journal of Virology, Oct. 1996, p. 7219-7223		
	CM	MIZUTANI et al., Inhibition of Hepatitis C Virus Replication by Antisense Oligonucleotide in Culture Cells, Biochemical and Biophysical Research Communications, Vol. 212, No. 3, 1995, pp. 906-911		
	CN	MIZUTANI et al., Long-Term Human T-Cell Culture System Supporting Hepatitis C Virus Replication, Biochemical and Biophysical Research Communications 227, 822-826 (1996)		
	CO	OGILVIE et al., Peptidomimetic Inhibitors of the Human Cytomegalovirus Protease, J. Med. Chem. 1997, 40, 4113-4135		
	CP	SCARSELLI et al., GB Virus B and Hepatitis C Virus NS3 Serine Proteases Share Substrate Specificity, Journal of Virology, July 1997, p. 4985-4989		
	CQ	SCHECHTER et al., On the Size of the Active Site in Proteases, Biochemical and Biophysical Research Communications, Vol. 27, No. 2, 1967		
	CR	SHIMIZU et al., Multicycle Infection of Hepatitis C Virus in Cell Culture and Inhibition by Alpha and Beta Interferons, Journal of Virology, Dec. 1994, p. 8406-8408		
	CS	STEINKUHLER et al., Product Inhibition of the Hepatitis C Virus NS3 Protease, Biochemistry 1998, Vol. 37, pp. 8899-8905		
	CT	SUDO et al., Establishment of an in vitro assay system for screening hepatitis C virus protease inhibitors using high performance liquid chromatography, Antiviral Research 32 (1996), pp. 9-18		

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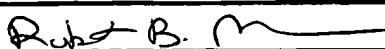
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CU	TAKESHITA et al., An Enzyme-Linked Immunosorbent Assay for Detecting Proteolytic Activity of Hepatitis C Virus Proteinase, Analytical Biochemistry (1997), 274, pp. 242-246
CV	TALIANI et al., A Continuous Assay of Hepatitis C Virus Protease Based on Resonance Energy Transfer Dipeptide Substrates, Analytical Biochemistry 240 (1996), pp. 60-67
CW	TAREMI et al., Construction, expression, and characterization of a novel fully activated recombinant single-chain hepatitis C virus protease, Protein Science (1998), 7:2143-2149
CX	TONG et al., Conserved mode of peptidomimetic inhibition and substrate recognition of human cytomegalovirus protease, Nature Structural Biology (1998), Vol 5., No. 9, pp. 819-826
CY	TSUDA et al., Poststatin, a New Inhibitor of Prolyl Endopeptidase, The Journal of Antibiotics (1996), Vol. 49, No. 3, pp. 287-291
CZ	TSUDA et al., Poststatin, a New Inhibitor of Prolyl Endopeptidase, The Journal of Antibiotics (1996), Vol. 49, No. 9, pp. 890-899
CA1	URBANI et al., Substrate Specificity of the Hepatitis C Virus Serine Protease NS3, Journal of Biological Chemistry (1997), April 4 Issue, pp. 9204-9209
CB1	WANG et al., Expression of HCV NS3 Protease and Detection of Its Activity in Mammalian Cells, 4th International Meeting on Hepatitis C Virus and Related Viruses, Molecular Virology and Pathogenesis, March 6-10, 1997
CC1	WASSERMAN et al., (Cyanomethylene) phosphoranes as Novel Carbonyl 1,1-Dipole Synthons: An Efficient Synthesis of $\alpha$ -Keto, Acids, Esters, and Amides, J. Org. Chem. (1994), Vol. 59, pp. 4364-4366
CD1	ZHANG et al., Probing the Substrate Specificity of Hepatitis C Virus NS3 Serine Protease by Using Synthetic Peptides, Journal of Virology, Aug. 1997, pp. 6208-6213
CE1	BENNETT et al., The Identification of $\alpha$ -Ketoamides as Potent Inhibitors of Hepatitis C Virus NS3-4A Proteinase, Biorganic & Medicinal Chemistry Letters 11 (2001), pp. 355-357
CF1	LLINAS-BRUNET et al., Studies on the C-Terminal of Hexapeptide Inhibitors of the Hepatitis C Virus Serine Protease, Bioorganic & Medicinal Chemistry Letters 8 (1998), pp. 2719-2724
CG1	NARJES et al., $\alpha$ -Ketoacids are Potent Slow Binding Inhibitors of the Hepatitis C Virus NS3 Protease, Biochemistry (2000), Vol. 39, pp. 1849-1861

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